REMARKS

Claim Objection

The Examiner objects to claims 6, 10, 13, and 16. Specifically, the Examiner believes that these claims include a typo and that "5000" in the claims should be --500-- in view of the specification. Applicant notes that "5000" is the value that Applicant intended for the claim. Accordingly, Applicant has not amended the claim and requests the Examiner to withdraw the objection.

Rejection under 35 U.S.C. § 102

Claims 1-5, 7-9, 21-22, and 24-26 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,404,972 (hereinafter referred to as "Gordon").

Applicant notes that claims 11-13 and 18-26 are cancelled without prejudice and, hence, are not addressed herein.

Claim 1

Claim 1 is directed to a method for reducing power consumption in an implantable stimulation device. The method delivers "a repeating a pattern of pulses to one or more tissues in vivo." The method comprises:

> dropping one or more pulses in the repeating pattern of pulses; and
> counting with a drop counter each of the one or more pulses dropped to determine completion of a dropped set within the repeating pattern of pulses when a number of dropped pulsed equals a drop parameter.

In the rejection of claim 1, the Examiner states that Gordon discloses "a variety of counters to correspond to selected intervals relating the heart physiological characteristics" and "a counter for generat[ing] stimulation pulses." Office Action, page 3. The Examiner also asserts that Gordon teaches conserving energy by minimizing the number of clock pulses required for various timeouts. Office Action, page 3.

Gordon discloses a number of timers or counters that are used to generate wakeup signals for a microprocessor in a pacemaker to cause the microprocessor to execute predefined routines. Col. 5, lines 57-60 of Gordon. Each predefined routine has a distinct function (generate an output pulse, sense noise, discharge capacitors, etc.) that is conventional for pacemakers. See TABLE A in col. 6 of Gordon.

The counter for generating stimulation pulses in Gordon is a counter that holds a value for the number of consecutive pulses to be applied to cardiac tissue for the purpose of responding to tachycardia in the patient. Specifically, when tachycardia is detected, the counter is loaded with the predetermined number. A pulse is generated and the counter is decremented. The pulse generation and counter adjustment is repeated until the counter reaches zero. Col. 13, line 56 - col. 14, lines 4 of Gordon.

In regard to the minimization of "clock pulses," Gordon states that the counters or timers can be clocked at different pulse "rates." That is, the pulses for the counters always occur at the respective subintervals; it is merely the timing between the subintervals that is varied for the various counters. Col. 6, lines 15-22 and TABLE A of Col. 6.

Applicant submits that these general purpose counters of Gordon do not meet the "dropping" elements of claims 1 and 13. Specifically, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

As explicitly recited in claim 1, the "repeating pattern" is not merely any pattern of pulses of any kind (i.e., the repeating pattern does not encompass mere "clock pulses"). Instead, the repeating pattern is a pattern of stimulation pulses generated by the implantable stimulation device that are applied to tissue. The repeating pattern is defined by an array of stimulation settings that are used to generate pulses according to a defined frequency. *See* paragraph [0033] of the application. Also, as used in claim 1, "dropping" refers to omitting

generation of a pulse during one of the defined times where a pulse would otherwise occur within the repeating pattern. The "drop counter" is used to count the number of pulses dropped for the purpose of controlling the number of dropped pulses according to a "drop parameter." In contrast, the counters in Gordon are merely general purpose counters used for conventional functions. There is simply no disclosure in Gordon of "dropping" pulses, of a counter used to count dropped pulses, or a drop parameter to control the number of dropped pulses.

Thus, Gordon does not disclose each and every limitation of claim 1 and does not anticipate claim 1. Claims 2-5 depend from claim 1 and are also not anticipated by Gordon.

Claim 7

Claim 7 recites:

> counting with a first pulse counter each stimulation pulse in the repeating pattern of pulses to determine completion of stimulation set of pulses within the repeating pattern of pulses when a number of stimulation pulses equals a stimulation parameter;
> dropping one or more pulses within the repeating pattern of pulses to form a dropped set of pulses;
> counting with a second pulse counter each of the one or more pulses dropped to determine completion of the dropped set of pulses when a number of dropped pulses equals a drop parameter; and
> resetting the first pulse counter and the second pulse counter upon completion of the repeating pattern of pulses.

For the reasons discussed above in regard to claim 1, Gordon does not disclose each and every limitation of claim 7. Therefore, Gordon does not anticipate claim 7. Claims 8 and 9 depend from claim 7 and, hence, are also not anticipated by Gordon.

Rejection under 35 U.S.C. § 103(a)

Claims 6, 10-20, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gordon.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the applied reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP § 2143. Applicant respectfully submits that the applied references do not satisfy these criteria.

Claims 6 and 10 respectively depend from claims 1 and 7 and, hence, inherit all limitations of their base claim. For the reasons discussed above, Gordon does not teach or suggest each and every limitation of claims 1 and 7. Therefore, a prima facie case of obviousness has not been established for claims 6 and 10.

Claims 11-13 are cancelled without prejudice.

Claim 14 recites:

> a first means for counting each stimulation pulse in the repeating pattern of pulses to determine completion of a stimulation set upon counting a first number of pulses associated with a stimulation parameter;
> circuitry configurable to drop one or more pulses within the repeating pattern of pulses to form a dropped set of pulses; and
> a second means for counting each of the one or more pulses in the dropped set to determining completion of the dropped set upon counting a second number of pulses associated with a drop parameter, resetting the first means and second means upon completion of the repeating pattern of pulses.

For the reasons discussed above in regard to claim 1, Gordon does not teach or suggest each and every limitation of claim 14. Claims 15-17 depend from claim 14 and, hence, inherit all limitations of claim 14. Therefore, a prima facie case of obviousness has not been established for claims 14-17.

Claims 18-20 and 23 are cancelled without prejudice.

New Claims

Applicant has added new claims 27-29. The new claims are supported by the original application. No new matter has been added.

Claim 27 recites:

> storing a plurality of sets of stimulation parameters within the implantable stimulation, each set of the plurality of sets including an electrode combination and a pulse characteristic;
>
> storing a frequency parameter, within the implantable stimulation device, defining an interval between generated pulses within the repeating pattern;
>
> storing a skipping parameter, within the implantable stimulation device, defining a number of pulses to be skipped; and
>
> cycling through the plurality of sets to generate pulses and deliver the pulses to tissue, the cycling producing successive pulses defined by the respective pulse characteristics and delivered to tissue through electrodes defined by the respective electrode combinations, wherein the cycling generates and delivers a pulse for each interval of the repeating pattern except for a number of intervals specified by the skipping parameter.

For the reasons discussed above, Gordon does not teach or suggest each and every limitation of claim 27. Claim 27 is patentable over Gordon. Claims 28 and 29 depend from claim 27 and, hence, are also patentable over Gordon.

Conclusion

Applicant respectfully submits that the application is in condition for allowance and requests the Examiner to pass the application to issue. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 02-051 from which the undersigned is authorized to draw.

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Respectfully submitted,

By _____
R. Ross Viguet
Registration No.: 42,203
FULBRIGHT & JAWORSKI L.L.P.
2200 Ross Avenue, Suite 2800
Dallas, Texas 75201-2784
(214) 855-8185
(214) 855-8200 (Fax)
Attorney for Applicant